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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,256	05/18/2005	Mitsuyuki Kanbe	KANBE3	5976

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EXAMINER	
HENRY, MICHAEL C	

ART UNIT	PAPER NUMBER
1623	

DATE MAILED: 12/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/535,256	KANBE ET AL.	
	Examiner	Art Unit	
	Michael C. Henry	1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-15 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-15 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 07/26/05.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-15 are pending in application

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US 3,912,591).

In claim 1, applicant claims a high pullulan content liquid, which has a viscosity of 2.5 mm^2/s or more in terms of a pullulan concentration of 10%(w/w) when determined at 30°C on the Ubelode viscometer method, a common bacterial count of less than 300 cells/g product, a negativity with respect to coliform group, a pH of 4.5 to 7.5, and a pullulan concentration of 20%(w/w) or more." Claim 2 is drawn to the composition of claim 1, wherein said pullulan has a weight-average molecular weight of (MW) of 5, 000 to 500, 000. Claims 3-5, 8, 9, 12, 13 are drawn to said composition which is in aqueous form and wherein said composition further contains disinfectants and bacteriostats such as ethanol.

Kato et al. disclose a high pullulan content liquid that was prepared from a bacterial culture medium, which has a final pH of 4.7, pullulan of molecular weight of 180, 000 which is produce in a yield of 71% (see Table 1-a, col. 3-4, see also col. 2, lines 19-41 and abstract). Kato et al. disclose that adjusting the pH of the culture medium controls the yield and degree of polymerization of the pullulan produced (see col. 1, lines 25-47 and col. 2, lines 19-41). In

addition, Kato et al. disclose that the viscosity of the culture varies depends on its pH (see col. 2, lines 19-41). Furthermore, Kato et al. disclose that the pullulan of low molecular weight can be readily purified and converted to products of low viscosity or to maltotriose (col. 1, lines 35-47). Kato et al. also disclose that the bacteriostat, ethanol can be added to the culture medium (col. 2, lines 7-10).

The difference between applicant's composition and the composition of Kato et al. is that Kato et al. do not determine the bacterial count of the composition and the %(w/w) of the pullulan in the composition.

It would have been obvious to one having ordinary skill in the art, at the time the claimed invention was made to have prepared the pullulan composition of Kato et al., and to determine the bacterial count and specific %(w/w) of the pullulan in the composition to produce purified product of low viscosity such as maltotriose, depending on need and availability.

One having ordinary skill in the art would have been motivated, to prepare the pullulan composition of Kato et al., and to determine the bacterial count and specific %(w/w) of the pullulan in the composition to produce purified product of low viscosity such as maltotriose, depending on need and availability.

In claim 6, applicant claims a method of transporting a high pullulan content liquid, which comprises a step of transporting said high pullulan content liquid of claim 1 under a temperature condition of 14°C or lower. Claims 7, 10, 11, 14 and 15 are drawn to said method of transporting pullulan under specific temperature conditions.

Kato et al. disclose a method of transporting a high pullulan content liquid, which comprises a step of transporting said high pullulan content liquid at a temperature condition of

27°C (see example 1, col. 3, line 53 to col. 4, line 60). Furthermore, Kato et al. disclose a method of transporting their pullulan into and out of a centrifuge (see col. 4, lines 4-13). It should be noted that the composition would be transported out of the centrifuge at the temperature equal to the temperature at which it was centrifuged. Furthermore, it is obvious and common in the art to centrifuge compositions, such as the pullulan composition that are prepared from biologically active microorganism compositions, at temperatures lower than room temperature so as to preserve their activity.

The difference between applicant's method and the method of Kato et al. is the temperature at which the pullulan liquid is trransported.

It would have been obvious to one having ordinary skill in the art, at the time the claimed invention was made to have used the method of Kato et al., to transport any pullulan liquid at low temperatures such below room temperature, during the process of preparing or centrifuging said pullulan composition, in order to produce purified product of low viscosity such as maltitriose, depending on need and availability.

One having ordinary skill in the art would have been motivated, to use the method of Kato et al., to transport any pullulan liquid at low temperatures such below room temperature, during the process of preparing or centrifuging said pullulan composition, in order to produce purified product of low viscosity such as maltitriose, depending on need and availability.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Henry whose telephone number is 571-272-0652. The examiner can normally be reached on 8.30am-5pm; Mon-Fri. If attempts to reach the

examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia A. Jiang can be reached on 571-272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael C. Henry

11/27/06

Shaojia Anna Jiang, Ph.D.
Supervisory Patent Examiner
Art Unit 1623

November 22, 2006.